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U.S. Patent Application Serial No.09/875,716 Attorney Decket No. 03226.110001;P6194

IN THE CLAIMS

Please amend the claims as follows:

[e1]1. (Currently Amended) A method computer system for finding a worst case aggressor set of a victim net based on a plurality of logically exclusive sets, the computer system comprising instructions for:

forming a first set, wherein the first set comprises an aggressor net of the victim net;

using the first set and the plurality of logically exclusive sets to formulate a problem; and

solving the problem to determine a worst case aggressor net of the victim net, wherein the worst case aggressor set comprises the worst case aggressor net.

- [e2]2. (Currently Amended) The methodcomputer system of claim 1, wherein the plurality of logically exclusive sets comprises a mutually exclusive set, and wherein the mutually exclusive set comprises a signal net.
- [e3]3. (Currently Amended) The methodcomputer system of claim 1, wherein the aggressor net in the first set has a corresponding weight.
- [e4]4. (Currently Amended) The methodecomputer system of claim 1, solving the problem comprising instructions for:

finding the worst case aggressor net of the victim net.

[e5]5. (Currently Amended)The methodcomputer system of claim 1, further comprising instructions for:

forming a second set, wherein the second set comprises an aggressor net
that is in the first set and that is part of the plurality of logically
exclusive sets.

[e6]6. (Currently Amended) The methods; omputer system of claim 5, further comprising instructions for:

forming a third set, wherein the third set comprises an aggressor net that is in the first set but is not part of the second set.

- [e7]7. (Currently Amended) The method computer system of claim 6, wherein the aggressor net in the third set becomes part of the worst case aggressor set.
- [e8]8. (Currently Amended) The methods omputer system of claim 5, further comprising instructions for:

reducing each of the plurality of logically exclusive sets to a second plurality of logically exclusive sets such that a net in a set of the second plurality of logically exclusive sets is part of the second set.

[e9]9.(Currently Amended) The methodopmputer system of claim &, wherein an empty set in the second plurality of logically exclusive sets is removed from the second

plurality of logically exclusive sets.

[e10]10.(Currently Amended) The methindcomputer system of claim 8, solving the problem comprising instructions for:

using a first representation to represent a net in the second set;
using a second representation to represent a set in the second plurality of
logically exclusive sets; and

creating an association between the first representation and the second representation when the net is part of the set.

- [e11]11.(Currently Amended)The method computer system of claim 10, wherein the first representation is a first node, and wherein the second representation is a second node.
- [e12]12.(Currently Amended) The method computer system of claim 10, wherein the association is an edge.
- [e13]13.(Currently Amended) The methodcomputer system of claim 10, further comprising instructions for:

selecting the second representation;

selecting an adjacent net of the second representation such that the adjacent net has a weight greater than another adjacent net of the first representation:

adding the adjacent net to the worst case aggressor set; removing an association of the second representation;

removing the second representation;

removing an association of the adjacent net;

removing the adjacent net; and

returning the worst case ag pressor set when there are no representations of the sets of the second plurality of logically exclusive sets remaining in the problem.

[e14]14.(Currently Amended) The method computer system of claim 1, wherein the problem is represented graphically

[e15]15.(Currently Amended) The method computer system of claim 12, wherein the graphical representation is a bipartite graph.

[e16]16.(Currently Amended) A software tool that finds a worst case aggressor set of a victim net, comprising:

a processor;

a memory; and

software instructions residing in the memory and executable in the processor for performing a series of operations to find a worst case aggressor net based on a plurality of logically exclusive sets.

[e17]17. (Currently Amended) The software tool of claim 16, wherein the plurality of logically exclusive sets comprises a mutually exclusive set, and wherein the mutually exclusive set comprises a signal net.

[e18]18.(Currently Amended) The software tool of claim 16, further comprising:

a portion that forms a first let, wherein the first set comprise an aggressor net of the victim net.

another portion that forms a second set, wherein the second set comprises an aggressor net that is part of the first set and that is part of the plurality of logically exclusive sets;

another portion that forms a third set, wherein the third set comprises an aggressor net that is part of the first set but is not part of the second set:

another portion that reduces the plurality of logically exclusive sets to a second plurality of logically exclusive sets such that a net in a set of the second plurality of logically exclusive sets is part of the second set; and

another portion that formulates a problem based on the second set and the second plurality of logically exclusive sets.

[e19]19.(Currently Amended) The software tool of claim 18, wherein the problem is represented graphically.

- {e20}20. (Currently Amended) The soft are tool of claim 19, wherein the graphical representation is a bipartite graph.
- [e21]21.(Currently Amended) The software tool of claim 18, wherein the aggressor net in the first set has a corresponding weight.
- [e22]22.(Currently Amended) The software tool of claim 18, wherein the worst case aggressor set comprises an aggress or net in the third set.
- [e23]23.(Currently Amended) The software tool of claim 18, wherein an empty set in the second plurality of logically exclusive sets is removed from the second plurality of logically exclusive sets.
- [e24]24. (Currently Amended) The software tool of claim 18, the problem comprising:

 a portion that uses a first epresentation to represent a net in the second set:
 - another portion that uses a second representation to represent a set in the second plurality of ogically exclusive sets; and another portion that create an association between the first representation and the second representation when the net is part of the set.
- [e25]25.(Currently Amended) The soft vare tool of claim 24, wherein solving the problem determines the worst case aggressor net, the software tool further

comprising:

a portion that selects a set in the second plurality of logically exclusive sets;

another portion that selects an adjacent net of the set such that the adjacent net has a weight greater than another adjacent net of the set; another portion that adds the adjacent net to the worst case aggressor set; another portion that removes an association of the set; another portion that removes the set; another portion that removes an association of the adjacent net; another portion that removes the adjacent net; and another portion that returns the worst case aggressor set when there are no sets of the second planality of logically exclusive sets remaining.

[e26]26.(Currently Amended) A methode imputer system for solving a problem to find a worst case aggressor net based on a logically exclusive set, the computer system comprising instructions for:

using a first representation to represent the logically exclusive set; selecting the first representation;

selecting a second representation, wherein the second representation represents an adjace at net of the first representation;

removing an association of the first representation;

removing the first representation

removing an association of the second representation;

removing the second representation; and
returning the adjacent net epresented by the second representation as the
worst case aggressed net

- [e27]27 (Currently Amended) The method computer system of claim 26, wherein the first representation is a first node, and wherein the second representation is a second node.
- [e28]28. (Currently Amended) The method computer system of claim 26, wherein the association of the first representation is an edge, and wherein the association of the second representation is an edge.
- [e29]29 (Currently Amended) The mett edcomputer system of claim 26, wherein the adjacent net represented by the score representation has a weight greater than another net in the problem.
- [e30]30.(Currently Amended) The method computer system of claim 26, wherein the problem is represented graphicall
- [e31]31.(Currently Amended) The method computer system of claim 26, wherein the graphical representation is a bipartite graph.
- [e32]32.(Currently Amended) A software tool comprising:

a processor;

a memory; and

software instructions residing in the memory and executable in the processor for performing a series of operations for solving a problem to find a problem t

[e33]33.(Currently Amended) The softwai tool of claim 32, further comprising:

a portion that uses a first representation to represent the logically exclusive

set;

another portion that selects the first representation;

another portion that select a second representation, wherein the second

representation represents an adjacent net of the first representation;

another portion that removes an association of the first representation;

another portion that removes the first representation;

another portion that removis an association of the second representation;

another portion that removes the second representation; and

another portion that returns the adjacent net represented by the second

representation as the worst case aggressor net.

[e34]34.(Currently Amended) The software tool of claim 33, wherein the adjacent net represented by the second representation has a weight greater than another net in the problem.

[e35]35.(Currently Amended) The software dool of claim 32, wherein the problem is represented graphically.

[e36]36.(Currently Amended) The software tool of claim 35, wherein the graphical representation is a bipartite graph.

[e37]37.(Currently Amended) A method omputer system for formulating a problem to find a worst case aggressor net of a victim net based on a logically exclusive set, the computer system comprising in structions for:

using a first representation to represent a net, wherein the net is an aggressor net of the victim net and is part of the logically exclusive set;

using a second representation to represent a set, wherein the set is the logically exclusive set, and

selectively creating an association between the first representation and the second representation when the net is part of the set.

[e38]38.(Currently Amended) The methe computer system of claim 37, wherein the first representation is a first node, and wherein the second representation is a second node.

[e39]39.(Currently Amended) The met odcomputer system of claim 37, wherein the

association is an edge.

[e40]40.(Currently Amended) A software ool, comprising:

a processor;

a memory; and

software instructions residing in the memory and executable in the processor for performing a series of operations for formulating a problem to find a worst case aggressor net of a victim net based on a logically exclusives set.

fe41141.(Currently Amended) The softwa e tool of claim 40, further comprising:

a portion that uses a first representation to represent a net, wherein the net
is an aggressor net of the victim net and is part of the logically
exclusive set;

another portion that uses a second representation to represent a set, wherein the set is the logically exclusive set; and

another portion that selectively creates an association between the first representation and the second representation when the net is part of the set.

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